

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Figure 1, which is amended to show the electronic control unit 85. Support for this amendment can be found at least in paragraph [0049] of the specification.

Attachment: One (1) Replacement Sheet

REMARKS

I. Status of the Application

By the present Reply, the Applicants are amending claim 1. In addition, the Applicants are adding new claim 21 to recite features of the invention as disclosed in the specification. No new matter is added.

Accordingly, claims 1-21 are all the claims currently pending in the application. Claims 1-12 have been rejected. Claims 13-20 have been withdrawn. The present Reply addresses each point of rejection raised in the Office Action. Favorable reconsideration is respectfully requested.

II. Claim Rejections Under 35 U.S.C. §§ 102(b) and 103(a)

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by, or, in the alternative, under 35 U.S.C. § 103(a) as allegedly being unpatentable over EP 0 456 931 to Horii et al. (hereinafter “Horii”). Claims 1 and 2 also stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Horii in view of U.S. Patent No. 2,856,234 to McNair et al. (hereinafter “McNair”). Claims 3-5 and 10-12 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Horii and McNair in view of U.S. Patent No. 6,739,574 to Simon. Claims 6-9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Horii, McNair, and Simon in view of U.S. Patent No. 5,433,365 to Davies.

By the foregoing amendment, claim 1 has been revised to recite that the Coanda flow amplifier comprises “an electronic control unit that adjusts the flow

cross section of the drive-flow discharge slit such that a pressure ratio between an output pressure of the drive flow that leaves the drive-flow discharge slit and an intake pressure of the drive flow that enters the drive-flow discharge slit does not exceed a critical pressure ratio.” Support for this amendment can be found at least in paragraphs [0010], [0011], [0024], [0048], and [0049] of the specification. The Applicants respectfully submit that none of the cited references, alone or in combination, teach or suggest the quoted claim features.

As discussed in the Reply dated May 13, 2010, Horii discloses a Coanda spiral flow device. As shown in Fig. 2 of Horii, the Coanda spiral flow device includes a first unit A, a second unit B, and an outer peripheral tube unit C that partially covers the first unit A and the second unit B and couples them together (page 2, right column, lines 34-39).¹ The first unit A has an introducing port 1, and the second unit B has a discharge outlet 4 (page 2, right column, lines 40-45). The outer peripheral tube unit C covers an annular groove 8 in the second unit B to form a ventilation distribution chamber 10 that communicates with a compressed gas inlet port 11 (page 3, left column, lines 18-22). The first unit A, the second unit B, and the outer peripheral tube unit C are connected by threaded fastenings at coupling flanges 3 and 9 (page 3, left column, lines 23-26). By adjusting the threaded fastenings, the clearance of the Coanda slit 5 through which compressed gas is fed can be set to a specified gap (page 3, left column, lines 26-29).

¹ The Applicants note that all citations to Horii are made to EP 0 456 931 A1.

However, Horii does not teach or suggest that the flow device includes “an electronic control unit that adjusts the flow cross section of the drive-flow discharge slit such that a pressure ratio between an output pressure of the drive flow that leaves the drive-flow discharge slit and an intake pressure of the drive flow that enters the drive-flow discharge slit does not exceed a critical pressure ratio,” as recited in amended claim 1. Instead, the clearance of the Coanda slit 5 is set by manually adjusting the threaded fastenings. Although the details of the adjustment are not explicitly discussed in Horii, Fig. 1 appears to show that the clearance of the Coanda slit 5 is set by physically turning the screws near the coupling flanges 3 and 9. Therefore, the clearance of the Coanda slit 5 cannot be adjusted by an electronic control unit, as recited in claim 1. Further, Horii does not disclose that the clearance of the Coanda slit 5 is adjusted “such that a pressure ratio between an output pressure of the drive flow that leaves the drive-flow discharge slit and an intake pressure of the drive flow that enters the drive-flow discharge slit does not exceed a critical pressure ratio,” as recited in claim 1.

In addition, as discussed in the Reply dated May 13, 2010, McNair discloses a liquid proportioning device. As shown in Fig. 3 of McNair, the proportioning is effected by the relative dimensions of the cross sectional area of the orifice 32 at the tapered inlet end 25 of the metering jet 22, and the cross sectional area of the venturi throat 11 (col. 8, lines 1-4). The proportioning may be varied by altering the ratio of these cross sectional areas (col. 8, lines 16-19). This can be accomplished by physically replacing the metering jet 22 with a

different metering jet having an orifice with a different cross sectional area (col. 8, lines 19-25). The end 28 of the metering jet 22 is provided with a slit 28' that can be used with a screwdriver to remove the metering jet 22 and then substitute a different metering jet (col. 8, lines 25-29). Therefore, the cross sectional area of the orifice 32 of the metering jet 22 is not adjusted by an electronic control unit, as recited in claim 1. Instead, the metering jet 22 must be manually removed and replaced to change the cross sectional area. Also, McNair does not disclose that the cross sectional area of the orifice 32 of the metering jet 22 is adjusted "such that a pressure ratio between an output pressure of the drive flow that leaves the drive-flow discharge slit and an intake pressure of the drive flow that enters the drive-flow discharge slit does not exceed a critical pressure ratio," as recited in claim 1. Accordingly, McNair does not teach or suggest a modification of Horii that would replicate the claimed invention.

Further, the Applicants submit that Simon and Davies also fail to disclose teachings that are missing in Horii and McNair. For example, Simon and Davies do not disclose "an electronic control unit that adjusts the flow cross section of the drive-flow discharge slit such that a pressure ratio between an output pressure of the drive flow that leaves the drive-flow discharge slit and an intake pressure of the drive flow that enters the drive-flow discharge slit does not exceed a critical pressure ratio," as recited in claim 1.

Accordingly, the Applicants respectfully submit that claim 1 is patentable over Horii, McNair, Simon, and Davies at least by virtue of the aforementioned

differences, as well as its additionally recited features. Further, claims 2-12 are patentable over Horii, McNair, Simon, and Davies at least by virtue of their dependencies on claim 1, as well as their additionally recited features.

III. Conclusion

If there are any questions regarding this response or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323, Docket No. 102063.56904US.

Respectfully submitted,

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